

REMARKS

This responds to the Office Action mailed on February 6, 2008. Claims 4-6 and 22-25 are canceled,; as a result, claims 1-3, 7-21 and 26-29 are now pending in this application.

§101 Rejection of the Claims

Claims 14-21 were rejected under 35 USC § 101 because the claimed invention was directed to non-statutory subject matter. Applicant has amended the specification regarding the term “machine-readable medium”, as suggested by the Office. Accordingly, Applicant respectfully requests that the rejection of claims 14-21 under 35 USC § 101 be withdrawn.

§102 Rejection of the Claims

Claims 4-6 and 22-25 were rejected under 35 USC § 102(a) as being anticipated by Simsic et al. (Simsic) U.S. Patent 6,269,484 B1. Applicant has canceled claims 4-6 and 22-25. Accordingly, the rejection of claims 4-6 and 22-25 is moot.

§ 103 Rejection of the Claims

Claims 1 and 18-19 were rejected under 35 USC § 103(a) as being unpatentable over Simsic et al. (Simsic) U.S. Patent 6,269,484 B1 in view of Barrau U.S. 6,968,007 B2. Claims 2 and 20 were rejected under 35 USC § 103(a) as being unpatentable over Simsic et al. (Simsic) U.S. Patent 6,269,484 B1 in view of Barrau U.S. 6,968,007 B2 further in view of Johnson et al. (Johnson), Frequency Scalable Video Coding Using MDCT, IEEE, Pgs. V-477-V480, 1994. Claims 3, 14-16 and 21 were rejected under 35 USC § 103(a) as being unpatentable over Simsic et al. (Simsic) U.S. Patent 6,269,484 B1 in view of Barrau U.S. 6,968,007 B2 further in view of Zeng U.S. Patent 7,203,234 B1. Claims 7-12 and 26-27 were rejected under 35 USC § 103(a) as being unpatentable over Simsic et al. (Simsic) U.S. Patent 6,269,484 B1 in view of Barrau U.S. 6,968,007 B2 further in view of Zeng U.S. Patent 7,203,234 B1 further in view of Beattie U.S. Publication 2001/0002205 A1. Claim 28 was rejected under 35 USC § 103(a) as being unpatentable over Simsic et al. (Simsic) U.S. Patent 6,269,484 B1 in view of Barrau U.S. 6,968,007 B2 further in view of Beattie U.S. Publication 2001/0002205 A1 further in view of

Zeng U.S. Patent 7,203,234 B1. Claim 13 was rejected under 35 USC § 103(a) as being unpatentable over Simsic et al. (Simsic) U.S. Patent 6,269,484 B1 in view of Barrau U.S. 6,968,007 B2 further in view of Beattie U.S. Publication 2001/0002205 A1 further in view of Johnson et al. (Johnson), Frequency Scalable Video Coding Using MDCT, IEEE, Pgs. V-477-V480, 1994. Claims 14-17 and 29 were rejected under 35 USC § 103(a) as being unpatentable over Simsic et al. (Simsic) U.S. Patent 6,269,484 B1 in view of Zeng U.S. Patent 7,203,234 B1 and further in view of Johnson et al. (Johnson), Frequency Scalable Video Coding Using MDCT, IEEE, Pgs. V-477-V480, 1994.

A) The Applicable Law under 35 U.S.C. §103

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness.¹ First and foremost, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.² In combining prior art references to construct a *prima facie* case, the Examiner must show some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art that would lead an individual to combine the relevant teaching of the references.³ The M.P.E.P. contains explicit direction to the Examiner that agrees with the *In re Fine* court:

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.⁴

An invention can be obvious even though the suggestion to combine prior art teachings is not found in a specific reference.⁵ However, while it is not necessary that the cited references or prior art specifically suggest making the combination, there must be some teaching somewhere

¹ *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988).

² *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); M.P.E.P. § 2143.03.

³ *In re Fine* at 1598.

⁴ M.P.E.P. § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d (BNA) 1438 (Fed. Cir. 1991)).

⁵ *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d (BNA) 1443 (Fed. Cir. 1992).

which provides the suggestion or motivation to combine prior art teachings and applies that combination to solve the same or similar problem which the claimed invention addresses. One of ordinary skill in the art will be presumed to know of any such teaching.⁶ However, the level of skill is not that of the person who is an innovator but rather that of the person who follows the conventional wisdom in the art.⁷ The requirement of a suggestion or motivation to combine references in a *prima facie* case of obviousness is emphasized in the Federal Circuit opinion, *In re Sang Su Lee*, 277 F.3d 1338; 61 U.S.P.Q.2D 1430 (Fed. Cir. 2002), which notes that the motivation must be supported by evidence in the record.

The test for obviousness under § 103 must take into consideration the invention as a whole; that is, one must consider the particular problem solved by the combination of elements that define the invention.⁸ References must be considered in their entirety, including parts that teach away from the claims.⁹ The fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.¹⁰

Recently, the Supreme Court reaffirmed the validity of the “teaching, suggestion, motivation” test in *KSR Int’l Co. v. Teleflex Inc.*, No. 04-1350 (U.S. Apr. 30, 2007) and guidance provided in a PTO Memo of May 3, 2007 recognizes this holding. In addition, the PTO Memo of May 3, 2007 indicated that “analysis supporting a rejection under 35 U.S.C. § 103(a) should be made explicit,” citing the Court’s decision.

B) Discussion of the rejection of claims 1-3, 7-21 and 26-29 under 35 U.S.C. § 103(a).

Claims 1-3

Among the differences, claim 1 recites “wherein the deinterlacing of one of the blocks of the number of blocks is based on the at least one motion compensation vector if a prediction error energy for the at least one motion compensation vector is less than a threshold.” The

⁶ (See, e.g., *In re Nilssen*, 851 F.2d 1401, 1403, 7 U.S.P.Q.2d 1500, 1502 (Fed. Cir. 1988) and *In re Wood*, 599 F.2d 1032, 1037, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)).

⁷ *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448, 474, 227 U.S.P.Q. 293, 298 (Fed. Cir. 1985).

⁸ *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 U.S.P.Q. 543, 551 (Fed. Cir. 1985).

⁹ See MPEP § 2141.02.

¹⁰ *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01.

Office indicated that Simsic and Barrau together disclose this limitation. Specifically, the Office indicated tat Simsic at Abstract; Figs. 1-7 and col. 4, lines 29-50 disclosed deinterlacing based on a motion compensation vector. The Office indicated that the condition “if a prediction error energy for the at least one motion compensation vector is less than a threshold” for which this deinterlacing occurs is disclosed by Barrau at Abstract; Fig. 2; col. 7, lines 25-44; col. 8, lines 36-41 and col. 9, lines 30-40.

Applicant respectfully traverses. These sections of the two references (alone or in combination) do not disclose that the recited deinterlacing is to occur if the prediction error energy is less than a threshold. These sections of Simsic relate to deinterlacing using “decoding motion vector data.” Simsic at col. 4, lines 29-33. However, these sections of Simsic do not disclose or suggest any type of condition (prediction error energy being less than a threshold) to be satisfied to detinterlace based on a motion compensation vector. Rather, these sections of Simsic relate to deinterlacing using the motion vector regardless of any type of condition. Moreover, these sections of Barrau relate to comparing a “predicted value” (Emci) to an “energy threshold Ec.” In Barrau, the predicted value is not equal to the predicted coding error energy. In particular the predicted coding error energy is defined as a separate parameter (Et). Accordingly, Barrau does not disclose or suggest any type of comparison of a prediction error energy with a threshold.

Thus, the cited references do not disclose or suggest all of the claim limitations. Accordingly, Applicant respectfully submits that the rejection of claim 1 under 35 U.S.C. §103 has been overcome. Because claims 2-3 depend from and further define claim 1, Applicant respectfully submits that the rejection of claims 2-3 has been overcome for at least the same reason.

Claims 7-13

With regard to claim 7, among the differences, claim 7 recites “performing motion estimation on the block of the video to generate an updated motion compensation vector if the block of the frame of the video is not intra coded and if the de-quantization scale factor is greater than the scale factor and if the prediction error energy of the block is greater than the energy threshold.” Based on the remarks set forth above regarding claim 1, Applicant respectfully

submits that the cited references do not disclose or suggest all of the claim limitations.

Therefore, Applicant respectfully submits that the rejection of claim 7 under 35 U.S.C. §103 has been overcome. Because claims 8-13 depends from and further defines claim 7, Applicant respectfully submits that the rejection of claims 8-13 has been overcome for at least the same reason.

Claims 14-17

With regard to claim 14, among the differences, claim 14 recites “deinterlacing the decoded video stream to output a deinterlaced video stream, using the at least one decode parameter extracted by the decoding, if the prediction error energy is less than an energy threshold or if the de-quantization scale factor is less than a de-quantization threshold.” Based on the remarks set forth above regarding claim 1, Applicant respectfully submits that the cited references do not disclose or suggest all of the claim limitations. Therefore, Applicant respectfully submits that the rejection of claim 14 under 35 U.S.C. §103 has been overcome. Because claims 15-17 depends from and further defines claim 14, Applicant respectfully submits that the rejection of claims 15-17 has been overcome for at least the same reason.

Claims 18-21

With regard to claim 18, among the differences, claim 18 recites “wherein the deinterlacing of one of the blocks of the number of blocks is based on the at least one motion compensation vector if a prediction error energy for the block is less than a threshold.” Based on the remarks set forth above regarding claim 1, Applicant respectfully submits that the cited references do not disclose or suggest all of the claim limitations. Therefore, Applicant respectfully submits that the rejection of claim 18 under 35 U.S.C. §103 has been overcome. Because claims 19-21 depends from and further defines claim 18, Applicant respectfully submits that the rejection of claims 19-21 has been overcome for at least the same reason.

Claims 26-29

With regard to claim 26, among the differences, claim 26 recites “a deinterlacer to deinterlace a block of a frame of video with a motion compensation vector that is derived from a

decode operation performed on the frame of the video if a prediction error energy for the block is less than an energy threshold.” Based on the remarks set forth above regarding claim 1, Applicant respectfully submits that the cited references do not disclose or suggest all of the claim limitations. Therefore, Applicant respectfully submits that the rejection of claim 26 under 35 U.S.C. §103 has been overcome. Because claims 27-29 depends from and further defines claim 26, Applicant respectfully submits that the rejection of claims 27-29 has been overcome for at least the same reason.

CONCLUSION

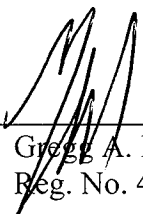
Applicants respectfully submit that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney ((612) 371-2103) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

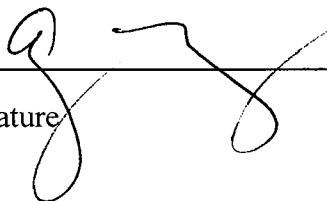
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 6th day of August 2008.

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Signature